

# ABSTRACT OF THE DISCLOSURE

An array antenna reception apparatus includes an array antenna, K adaptive receivers, and demodulated  
5 signal synthesizer. The array antenna has M (M is an integer of 1 or more) antenna elements linearly laid out on each side (sector) of a polygon having K (K is an integer of 3 or more) sides. Each adaptive receiver receives reception signals from the M antenna elements for  
10 a corresponding sector, independently forms a directional pattern having a gain in a desired signal direction for the sector, receives a desired signal, and suppresses an interference signal. The demodulated signal synthesizer receives K demodulated signals as outputs from the K  
15 adaptive receivers, weights and synthesizes the signals, and outputs a demodulated signal for a user.